

ABSTRACT*Changes of Hemoglobin Levels after Giving the Iron Supplementation to Teenage Girl in SMA Negeri 3 Surabaya*

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The prevalence of anemia in 13-18 years teenage girls according RISKESDAS had been rising 19.7% in 2007 and increased in 2013 by 22.7%. A not well-treated lack of iron could result in the decreasing of body endurance, learning concentration, and the risk of having a low birth weight baby with an adverse live quality. The purpose of this research was to determine the change of hemoglobin levels after giving the iron supplementation to teenage girl in SMAN 3 Surabaya.

This study use Pre Test Post Test Control Group Design and used XI grader teenage girls of SMAN 3 Surabaya as samples of study. Sampling method employed was purposive sampling that met inclusion criteria and samples were randomly divided into two groups. The study was done between March-April 2016. Independent variables studied were placebo and iron supplementation. Dependent variable that studied was hemoglobin levels. Supplementation administration was conducted every Wednesday for 6 week in a row. Data was analyzed using Independent Samples Test and paired t test.

Study results showed that level of hemoglobin in placebo group prior before treatment was $12.84 \pm 1,54g / dl$ and after treatment was $12.55 \pm 1,76g / dl$, and this alteration was not significant $p = 0.357$. Meanwhile iron treatment group prior before treatment was $11.38 \pm 1,04g / dl$ increased to $12.04 \pm 1,31g / dl$, and statistical analysis showed that it increased significantly $p = 0.009$. Mean hemoglobin level delta in both group was $0.18 \pm 1,24g / dl$ and statistic analysis result showed a significant difference $p = 0.016$.

In conclusion, there was a significant difference between hemoglobin level delta in placebo group and iron treatment group in teenage girls.

Keywords: Iron supplementation, hemoglobin levels, teenage girl